

P-3 Orion 04/26/18

Aircraft: [P-3 Orion - WFF](#) (See full schedule)

Flight Number: 2018 OIB Arctic -Science #16

Payload Configuration: 2018 OIB Arctic

Nav Data Collected: No

Total Flight Time: 8.8 hours

Submitted by: Janet Letchworth on 04/26/18

Flight Segments:

From:	BGSF	To:	BGSF
Start:	04/26/18 10:35 Z	Finish:	04/26/18 19:20 Z
Flight Time:	8.8 hours		
Log Number:	18P008	PI:	Nathan Kurtz
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	This flight covered the Southwest Glaciers 01 line. The team also was able to retrace areas from previous flights that had been missed due to weather.		

Flight Hour Summary:

	18P008
Flight Hours Approved in SOFRS	201.2
Total Used	190.4
Total Remaining	10.8

18P008 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
03/13/18	2018 OIB Arctic - Airworthiness Test Flight	Other	0.8	0.8	200.4	
03/14/18	2018 OIB Arctic -Project Test Flight - Laser	Other	2.6	3.4	197.8	
03/15/18	2018 OIB Arctic -Project Test Flight - Radar	Other	5.7	9.1	192.1	
03/18/18	2018 OIB Arctic -delta ATF	Other	0.8	9.9	191.3	
03/20/18	2018 OIB Arctic -Transit to Thule	Transit	7.9	17.8	183.4	
03/22/18	2018 OIB Arctic - Science #1	Science	7.8	25.6	175.6	
04/03/18	2018 OIB Arctic - Science #2	Science	7.9	33.5	167.7	
04/04/18	2018 OIB Arctic - Science #3	Science	8.1	41.6	159.6	
04/05/18	2018 OIB Arctic - Science #4	Science	8	49.6	151.6	
04/06/18	2018 OIB Arctic - Science #5	Science	8.8	58.4	142.8	
04/07/18 - 04/08/18	2018 OIB Arctic - Science #6	Science	8.1	66.5	134.7	
04/08/18 - 04/09/18	2018 OIB Arctic - Science #7	Science	8.3	74.8	126.4	
04/14/18 - 04/15/18	2018 OIB Arctic - Science #8	Science	7.7	82.5	118.7	
04/16/18	2018 OIB Arctic - Science #9	Science	8.2	90.7	110.5	

04/18/18	2018 OIB Arctic - Science #10	Science	8	98.7	102.5
04/19/18	2018 OIB Arctic - Science #11	Science	7.7	106.4	94.8
04/20/18	2018 OIB Arctic -Transit to Kanger	Transit	4.2	110.6	90.6
04/21/18	2018 OIB Arctic - Science #12	Science	8.1	118.7	82.5
04/22/18	2018 OIB Arctic - Science #13	Science	6.5	125.2	76
04/23/18	2018 OIB Arctic - Science #14	Science	8.2	133.4	67.8
04/25/18	2018 OIB Arctic - Science #15	Science	7.7	141.1	60.1
04/26/18	2018 OIB Arctic - Science #16	Science	8.8	149.9	51.3
04/27/18	2018 OIB Arctic - Science #17	Science	8	157.9	43.3
04/29/18	2018 OIB Arctic - Science #18	Science	8.3	166.2	35
04/30/18	2018 OIB Arctic - Science #19	Science	9.3	175.5	25.7
05/01/18	2018 OIB Arctic - Science #20	Science	7.4	182.9	18.3
05/03/18	2018 OIB Arctic -Return Transit Leg #1	Transit	6.4	189.3	11.9
05/03/18	2018 OIB Arctic -Return Transit Leg #2	Transit	0.6	189.9	11.3
05/03/18	2018 OIB Arctic -Return Transit Leg #3	Transit	0.5	190.4	10.8

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

Related Science Report:

OIB - P-3 Orion 04/26/18 Science Report

Mission: OIB

Mission Summary:

Mission: Southwest Glaciers 01 + parts of Southwest Coastal

Priority: High + Baseline

This mission incorporates previously-flown lines over Sukkertoppen Ice Cap and over four glaciers near Nuuk, including Kangiata Nunaata Sermia, Tasersuaq, Narsap Sermia, and Akugdlersupasermia. We also re-fly a series of ICESat lines covering the southernmost lobe of the Greenland Ice Sheet. We return to Kangerlussuaq along a lengthy ICESat track over southern Greenland. For 2018 we modify this flight to include overpasses of three in-situ experiment sites (DYE-2, SITEJ, and KAN-U) at the request of Mike MacFerrin.

This mission was an easy choice today, given the forecast elsewhere in Greenland. We experienced nearly completely clear skies and relatively light winds. A lowpass approach over Narssarssuaq (one of our emergency alternate airfields) was performed, with laser and radar instruments briefly turned off. Mild turbulence was experienced, as expected, which was a relief given the significant terrain we crossed during the southeastern part of the mission. We then were able to survey the four southernmost grid lines of Southwest Coastal A, which were missed previously due to clouds, as well as some sites requested by Jason Box. We then completed the four flowlines that are normally part of this mission, but not the survey of Sukkertoppen, for which we had run out

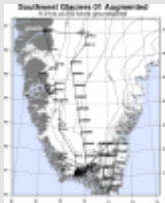
of time. All instruments performed well overall, and only a few minutes of clouds were encountered. MCoRDS experienced a malfunction early in flight that caused the loss of about a couple of kilometers of data. We flew a ramp pass at 1500 ft.

Attached images:

1. Map of today's augmented mission (John Sonntag / NASA)
2. Raven / DYE2 camp as the P-3's shadow passes by (Joe MacGregor / NASA)
3. Surface melting has just begun in far southern Greenland (Joe MacGregor / NASA)
4. A glacier near Narssarssuaq that must have recently calved a significant series of icebergs relative to its size (Joe MacGregor / NASA)
5. A relatively steep icefall for southern Greenland in front of ice mélange (iceberg and sea ice mix) that grades into sea ice with a distinctive set of fracture patterns (Joe MacGregor / NASA)
6. Peaks in far southern Greenland tend to have steeper walls than those along the southeastern coast (Joe MacGregor / NASA)
7. A minor mountain ridge dividing two distinctly glacial valleys (Joe MacGregor / NASA)
8. The southern Greenland town of Narssaq, complete with soccer field (Joe MacGregor / NASA)

Images:

Map of today's mission



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Raven / DYE2 camp as the P-3's shadow passes by



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Surface melting has just begun in far southern Greenland



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A glacier near Narssarssuaq that must have recently calved a



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A relatively steep icefall for southern Greenland in front of ice



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Peaks in far southern Greenland tend to have steeper walls than



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The southern Greenland town of Narssaq, complete with soccer field



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A minor mountain ridge dividing two distinctly glacial valleys



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Submitted by: Joseph MacGregor on 04/27/18

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